STATE OF VERMONT
DEPARTMENT OF PUBLIC SERVICE

IN RE: THE 2014 VERMONT TELECOMMUNICATION PLAN

August 28th, 2014
7 p.m.
- - -
47 Farrell Road
Rutland, Vermont

Public Hearing held before the Vermont Department of Public Service, at the Hampton Inn, Wentworth Room, Rutland, Vermont, beginning at 7 p.m.

P R E S E N T:

Vt. Department of Public Service:

James Porter, Esq., Director of Telecom
Clay Purvis
Corey Chase

ALSO PRESENT:

Tina Martine Victor
Alice Nitka
Christine Kumka

P R O C E E D I N G S

MR. PURVIS: Okay. Well, I guess we've done introductions, but I'll do it again for the record. My name is Clay Purvis. This is Jim Porter, and at the end, we have Corey Chase. We work for the Department of Public Service.

Tonight we're here to hold a public hearing on the comments draft on the ten-year telecommunications plan. Tonight is about taking comments from the public, and we will consider those comments as we revise the final plan.

If you would like to speak, there's only two people here tonight, so you can.

MR. PORTER: And the one thing I might add even in case you haven't had a chance to review the plan, we have copies here. It's on our website. It's on the legislative website. It encompasses, you know, plain old telephone service, cable, broadband, broadband broadband, cellular, so, it is kind of wide open, and whatever your comments or questions might be about any of it, it's all sort of covered in there.

MS. NITKA: All right. So, I haven't read that in a long time. Don't know that I've ever read it.

MS. VICTOR: Maybe I'll grab one. I know. It's pretty -- can I get you one, Alice?
MS. NITKA: Sure. Please.
MR. PORTER: We did try very hard -- when I started at the Department nine years ago, they would bring in a copy of the telecom plan and the electric plan and say, here, read this, and I literally -- I couldn't read the telecom plan. So, we've tried very hard this time to make one that's readable to people.
MS. NITKA: So, this is a big document. So, I guess some questions I had were -- and this might not be the right forum, but in terms of like some of the -- there's a situation that I'm aware of that that's been going on for a couple of years now between Comcast and Fairpoint and people are caught in the middle and not being served and it's very frustrating. Several of them have at-home businesses and they're getting nothing, and I'm not sure, where does one go to try and bang their heads together to get them to work together.
It has something to do with the poles that one owns, and many years ago in the flood, not Irene, but the previous flood, they changed this road in Reading, Vermont and dropped the road and

along that road are where the poles are and so nobody seems to want to take responsibility for getting these other people on who are on where the road is, resolving this problem with the poles.
MR. PORTER: So, is it a situation where you got like new poles, but you've still got old poles next to them or they won't relocate them?
MS. NITKA: No. One company owns the poles that has, I guess, the high speed and broadband, I guess, all the stuff. Those people are on dial-up. It's a corner of Reading, Vermont, which is a place in between Ludlow and -- well, what's it between? It's south of Woodstock. And, anyway, this doesn't seem to be able to get resolved. It's been many years now, and they seem just lost.
MR. PORTER: I can tell you, if it's a pole problem, any utility poles that you see anywhere in Vermont, anybody who is a provider of service has a right to be on those poles.
MS. NITKA: Right.
MR. PORTER: And so if that kind of dispute is going on, that's something that we can easily --
MS. NITKA: Well, can only -- did you say only the owners of the poles or anybody can be on?
MR. PORTER: Anybody.

MR. CHASE: It sounds like there is more to it, and we will have to try and sort it out.
MS. NITKA: Yeah, there is obviously something more to it.
MR. CHASE: Do you have an address or a person we could contact?
MS. NITKA: Sure.
MR. PORTER: Somebody we could contact.
MS. NITKA: Sure. Well, I know a family that's on it who has trouble, their name is Peplau, P-E-P-L-A-U, and I could call you and get you their phone number.
MR. PORTER: We'll give you our cards, but that's something that we can --
MS. NITKA: Okay. You know, these people have a farming business and they're stuck, and it isn't as if -- other people on both ends of them do have service. So, they're sort of -- anyway, okay, that would be great.
MR. PORTER: And if it involves Comcast, that's another thing we've been talking a lot about lately, the way it is now, the Public Service Board has got a rule and there's kind of this mathematical calculation, Corey knows more about it than I do, but, you know, once you get a certain amount of

density per mile, the cable company has to go and build that out, and we had a hearing last night and it can be that kind of situation.

MS. NITKA: That was on that kind of issue -- the kind of issue you had the hearing on about last night was about --

MR. PORTER: Somebody brought that up. They thought they had enough neighbors, you know, to where they could get Comcast to come and provide service for free. You can always get service from them, but they will very likely say, thank you --

MS. VICTOR: You mean cable service?

MR. PORTER: Right. But they'll likely...

MS. VICTOR: I remember going through that, calling them, and it would have been something like --

MR. PORTER: Twelve thousand.

MS. VICTOR: Oh, some huge amount of money. Yeah, because we didn't have definite density on the road until Fairpoint provided it.

MR. PORTER: Right. And so one of the things we are looking at is whether the density -- whether we need to change the rule and make it smaller so we can get more buildout.

MS. NITKA: There are some other families

that are in the same position right along that same stretch of road who are all wanting to get on something, and I don't know what the density is, but that's one issue.

MR. PORTER: Is that a retail territory?

MR. CHASE: Reading? Maybe.

MS. NITKA: No. Apparently not.

MR. PORTER: No.

MS. NITKA: No. Because I know this is Comcast and Fairpoint. VTel is all around there, but not right there, I don't think.

MR. PORTER: But you know VTel also has got a wireless project they're working on.

MS. NITKA: Right. VTel is living right near me. They've hired hundreds of people that are Mastech, M-A-S-T-E-C-H, out of Minnesota. They're running all over the place, and they're laying line all over the place.

MR. CHASE: In the VTel territory?

MS. NITKA: Yes.

MR. CHASE: They're bringing -- the company, VTel, is bringing fiber to the home throughout the VTel service territory.

MS. NITKA: Yeah, boy, they're doing phenomenally. Of course, they have a lot of money.

MR. CHASE: Well, yeah, it's all paid for by the Federal government.
MS. NITKA: Right.
MR. PORTER: Lots of money.
MS. NITKA: Lots of money. They have all these guys that are all living in Ludlow where I live. Maybe they're living other places, too, but I see like twenty of them living in any place that's for rent, and they all have these big white trucks with Minnesota plates, and they're here for months on end. As a matter of fact, some of them a couple of years.
MS. VICTOR: So, I guess the thing I'm confused about, so VTel is doing all of this fiber, which from everything I heard, is the way to go. You know, it has the most bandwidth, it's the most reliable, it's not wireless, but then on top of it, they're also doing wireless.
MR. PORTER: VTel has got two projects. One, the first VTel is the independent telephone company out of Springfield, and they got -- was it seventy-six, seventy-seven million dollars? And so with that -- for that grant they got, that was to take their telephone service territory and do fiber to the home, and they're working on that, about

completed with that, I think.
And then they got another grant to do a wireless broadband project. That project, if you look at the number of people -- for instance, in their service territory, where they did fiber to the home, it's about 18,000 people. The wireless project, I think it is supposed to cover, is it 44,000 roof tops, houses in the state?
MS. NITKA: Wow.
MR. PORTER: And so --
MR. CHASE: But they're using private capital to go throughout the state.
MR. PORTER: Right. And so what they're doing -- and so all of those addresses that they are required to cover under the federal grant, they're also putting in their own money trying to make literally a statewide project.
MS. VICTOR: Hum.
MR. PORTER: It has not been built out as quickly as we had thought it was going to be, but that's, but that's a huge broadband project that's in place.
MS. VICTOR: And is it the goal to have like complete wireless coverage throughout the entire state? Is that --

MR. PORTER: Well, the goal for the grant was for them -- is for them to provide broadband service to people who don't have it.
MS. VICTOR: Umm-hmm.
MR. PORTER: And then what they sort of decided on top of it was we're going to spend some of our own money.
MS. VICTOR: Broadband meaning Wi-Fi?
MR. PORTER: Not Wi-Fi. Wireless broad...
MS. VICTOR: Just connectivity through cellular phone but not necessarily --
MR. CHASE: So, they have a -- so, I'll digress and describe the VTel project.
MS. VICTOR: Okay.
MR. CHASE: VTel was awarded about -- it was about 40 million dollars to build this statewide project, not --
MS. VICTOR: And that was a federal -- another grant or something?
MR. CHASE: So, they had three federal grants from the stimulus program.
MS. VICTOR: Okay.
MR. CHASE: The ARRA stimulus program in 2009. The ARRA stimulus program in 2009 had three grants for VTel. One of them was the fiber to the

home project throughout their service territory. The second was a wireless broadband project to bring broadband internet access to a group of census blocks that were identified as people being unserved then at the time in 2009. The third is a fiber network along a number of major highways to serve schools and libraries.

MS. VICTOR: Okay.

MR. CHASE: So, specifically, the wireless program that VTel is embarking on will use a cellular license that VTel purchased in an auction in the mid 2000s. It's a reclaimed television channel, one of the 700 megahertz channels, that in many other parts of the company is being used by AT & T and/or Verizon to provide LTE.

VTel was awarded -- it was that 700 megahertz -- the block of 700 megahertz channels was reclaimed from UHF television channels in the mid 2000s and converted to cellular technology and was auctioned off in the mid 2000s and VTel won the award but had not had the capital to put into building towers to light up that frequency. This federal award gave them the money to put towers up to use the frequency that had been previously used for UHF television and is now being used by AT & T

and Verizon in other parts of the country.
MS. VICTOR: Because, I mean, AT & T invested like 60 million, right, in infrastructure here in Vermont? Is that just straightforward cell towers and --
MR. CHASE: AT & T has been doing -- AT & T and Verizon both have been putting a lot of money into Vermont and building towers and building new towers and inputting new radios in existing towers that would let them offer new, new technologies over the same frequencies that they had been using and offer service in these new frequencies that are becoming available like --
MS. VICTOR: So, is this more for streaming, you know, like greater capacity service for...
MR. CHASE: So, AT& T and Verizon are both building new towers and putting new technology, new equipment, on existing towers that will let them bring new technology to offer higher speeds for data. So, you hear -- the buzzword for that is 4G and 4G LTE. The towers had equipment on them that would allow a 3G service.
MS. VICTOR: Is that WiMAX? Is that the same thing?
MR. CHASE: So, WiMAX is a competing

technology to LTE.
MS. VICTOR: Okay.
MR. CHASE: WiMAX and LTE are similar in their approaches to using the frequency and their algorithms for trying to pass more bits over a certain spectrum and they're similar but different enough that different equipment won't work together.
MS. VICTOR: So, do we have both in the State of Vermont, or is it one or the other?
MR. CHASE: No.
MS. VICTOR: I mean we have 4G LTE.
MR. CHASE: Sprint was doing some WiMAX technology, but basically everybody has abandoned WiMAX and everybody, all of the carriers, are adopting LTE.
MS. VICTOR: Okay. Which makes more sense, right?
MS. NITKA: And VTel is doing that, too.
MR. CHASE: So, VTel is also using LTE.
MS. NITKA: Yeah.
MR. CHASE: Pretty much all of the carriers are using LTE technology.
MS. VICTOR: So, it's fourth generation. What is the LTE?
MR. CHASE: All of this stuff is sort of --

describing wireless technology is complicated, but it's always been evolving and 2G kind of rolled easily into the next generation.

MS. VICTOR: Okay.

MR. CHASE: And so this acronym LTE stands for long-term evolution, and it's approach to the technology that allows the companies to constantly improve their service by tweaking the algorithms instead of having to remove and install new antennas all the time, which is what they're doing now.

MS. VICTOR: Okay.

MR. CHASE: So, right now we've been dealing with, we've been dealing with -- one of the things that's discussed in the Telecom plan is 248(a). 248(a) is a land use law that allows the Public Service Board to issue permits to install new towers or make changes to existing towers, and a lot of the work that has been done in the last couple of years with 248(a) has been petitions to the Board to modify existing towers where Verizon and AT & T in particular are taking down old antennas and putting up -- that were built to do 3G, and they're putting up new antennas that are able to do 4G both in the existing frequencies and as I mentioned in the 700 megahertz frequencies, the same kind of frequencies

that VTel is using.
MS. NITKA: So just to -- I'm not sure what your format is here. Can we just gab? Is that the deal?
MR. CHASE: Well, we can sort of gab, but we also have a court reporter.
MS. NITKA: Yes, I see.
MR. CHASE: And the purpose -- I was going into detail about that. Maybe it would be better for me to talk to you more about that later.
MS. NITKA: Okay.
MR. CHASE: The purpose right now especially with the court reporter is to allow us to gather comments about the Telecom plan so we can use those comments as we revise the plan. But we're here to talk to you.
MS. NITKA: But we may not know enough to make the comments.
MR. PORTER: Right, we're here in Rutland with just two people so we're happy to gab. Three. I'm sorry.
MS. KUMKA: I'm with the press. I'm with PEG TV. My first name is Christina, last name Kumka. I'm a reporter with the public access government channel here in Rutland and I'm a

freelancer with the Mountain Times and some other statewide newspapers. So, I can ask you for your IDs later if you would like. I am just going to take notes throughout the meeting if you don't mind.
MR. PORTER: Okay. But you can make comments or ask questions as well.
MS. KUMKA: Okay. I will. Thank you.
MR. CHASE: In other hearings that we've had this week, representatives from the PEG channels have many very helpful comments on our draft.
MS. NITKA: Okay. So, there are so many people out there that continuously have questions about all kinds of things that quite frankly I don't understand all of them, but another one is the new towers that have gone up and are not activated it seems. There are several of those. At least people believe they are not activated. I've tried several of them myself with a Verizon phone and there's absolutely zilch, and they've spent huge amounts of money on some of them, getting roads built to them, and the people in the neighborhood I mean obviously not those right under the tower, because they're told they're not going to get anything from it, but those that thought they were going to get something and a couple of them have been up for more than a

year now and there's no action. So, I don't know what's the situation with those.

MR. CHASE: So, there are a number of possible explanations for that. The first -- the easiest one is it might be being put up by AT & T, and there might not be --

MS. NITKA: Yeah.

MR. CHASE: So, in our state, we have four primary service providers, AT & T, Verizon, Sprint and U. S. Cellular, and a tower that has AT & T service on it will do nothing for you if you are a Verizon customer and vice versa.

MS. NITKA: Right. But aren't they -- can they sell space on those?

MR. CHASE: They can and maybe sometimes they do, but not always.

MS. NITKA: Maybe they don't want to, I mean.

MR. CHASE: No. They're always happy to have another tenant on there, but it might also be the case that a provider doesn't need service from that particular tower, and in many cases, it might actually impair -- it might make the service worse. So, for instance, if you have an area with marginal service from AT & T and a new tower comes

up in that area that's got marginal service, it might be in -- it might be in a poor position to help improve the coverage from AT & T, and AT & T might decide to not put anything on that tower because it would cause interference with the other AT & T towers.

MS. NITKA: I'm talking about the people who have no service, areas where there is absolutely no service. Weston, Vermont, no service. Now, there is a brand new tower on Terrible Mountain. Cost a fortune to put it in. They put in a big road, you know enormous culverts bigger than the state has in, and it's there, and everybody and his brother who has any kind of phone has tried it and so many people say, hey, we're not getting a thing.

MR. PORTER: We get calls from people with that same very same question; and if you refer them to us, we can look into it and we'll find out whose tower it is and we can find out.

MS. NITKA: I think it might be AT & T.

MR. CHASE: Excuse me. It also might take more time than you think to get the -- just because the tower is installed and the road is installed, one of the other impediments to getting service up is getting the terrestrial connection, the fiber

connection out to the tower, and that often ends up being a real bear, and it takes a long time.

MS. NITKA: A real bear?

MR. CHASE: Well, it could take a long time.

MS. NITKA: Oh, so maybe they'll never get it. All right. Okay.

MR. CHASE: Well, they wouldn't -- the company that is putting the tower in is putting a lot of money in. I mean they're putting half a million dollars into that.

MS. NITKA: They're putting a fortune into it.

MR. CHASE: They're not going to do that unless they know for sure...

MS. VICTOR: But they do it, that money is coming from AT & T or Verizon or whatever?

MR. PORTER: Or Verizon.

MR. CHASE: Yeah.

MS. VICTOR: It's all on their buck, because they stand to make money from it.

MR. CHASE: Yeah.

MS. VICTOR: So, are they encouraged to merge on tower projects so that you don't have AT & T -- because I remember, I don't remember the specifics, but I remember there was a town that was

upset because they wanted two towers and --
MR. PORTER: Actually, the law now requires that if there's a tower close by, when an applicant comes in, they have to make a -- they have an obligation to -- there is a co-location. It doesn't always work out. It may not be exactly in the right place or there may not be room on it, but actually 248(a), which is the permitting, there is now a co-location piece to that.
MS. VICTOR: Okay. One other thing. I think this was -- I think it's like maybe a subcontractor or some division of perhaps AT & T, but -- I'm trying to think. I'm just -- all right. I might as well read this. It's like the Vanu Coverage Company small cell initial deployment creating a wholesale carrier cellular network in Orange and Lamoille Counties serving multiple carriers and standards is in deployment. The network has been open to commercial traffic in several corridors. Contract amendments are in progress for changes and target corridors to be served, 72 of the planned 95 VTA sites are in operation, and the project is expected to be completed in the third quarter of fiscal year 2014. It looks like half a million dollars. It's like

five hundred fifty-two thousand. So, these are not -- are these all major cell towers? Are they small -- like what are these, small cell?

MR. PORTER: I'm going to let Corey explain the Vanu Coverage-Co project because it's one of his favorites.

MS. VICTOR: Okay.

MR. CHASE: So, there have been many attempts to try to address the problem of having inadequate cellular coverage in the state. The Vermont Telecommunications Authority contracted with a company called Vanu. Well, Vanu is the company that manufactures this equipment, but Coverage-Co is the name of the company with whom Vanu and VTA deals. It's an integrative technology that employs very low power cellular base stations that are located on a series of utility poles, and they only provide service within about a quarter mile.

MS. VICTOR: Is it like DAS, distributed antenna?

MR. CHASE: It's something like that, but instead of a distributed antenna, they're very low power. It's something equivalent to a DAS, but each of these small antennas is individual -- it's not antennas. They are a small radio, and that you have

distributed antennas in that you have small radios and there are many of them along the road and each of them has an internet -- requires an internet connection and they are connected back to a cellular base station over the internet.

These low power antennas -- low power cellular transmitters are within line of sight of each other so that a person traversing that road would be handed off from one radio to the other as they drive along the road. They only -- as I said, they only serve about a quarter mile, so they don't serve really very far off the road; and if you have a series of 500 of them along a 10- or 20-mile stretch of road, you can easily serve a stretch of road that's in a tight canyon that would be difficult to serve with traditional big tall cellular antennas.

MS. VICTOR: So, it's designed for the terrain to sort of just serve some little enclave or some little out of the way area so you're not...

MR. CHASE: It's designed for roads. It's not designed to serve --

MS. VICTOR: Okay. Just for roads.

MR. CHASE: It's designed for roads. It can be used for other things, but...

MS. VICTOR: So, it's using poles, existing poles?
MR. CHASE: They put them on utility poles.
MS. VICTOR: Okay.
MR. CHASE: And the company, Coverage-Co, that is doing this innovative work has a roaming agreement with a major cellular company. So, that a Sprint --
MS. VICTOR: AT & T?
MR. CHASE: Sprint.
MS. VICTOR: Sprint.
MR. CHASE: So, if you were a Sprint customer and you were driving -- you leave your Sprint territory in Burlington and you're driving down this remote road in Orange County, Sprint will sense the signal and it will recognize that it's a signal on which it can roam and it will provide you service on this --
MS. VICTOR: But you shouldn't be using your phone in the car anyway if you're driving.
MS. NITKA: You pull over.
MR. CHASE: Assuming it's hands free.
MR. PORTER: Okay. It's hands free.
MS. NITKA: Hands free.
MR. CHASE: Assuming it's hands free.

MS. NITKA: Or you're parked.
MR. CHASE: Or you're parked, right.
MS. NITKA: So, here's another issue. I don't know if this is in your area that you're free to discuss. The new electric line that's proposed to come from Canada under the lake and this is the Blackstone Group. I forget what their little mini name is now, but they're coming -- first they were saying they were coming along the VELCO line, and now they're saying they're coming along all the highways and local roads, et cetera, et cetera, to get to the Cavendish substation, and they're going to build the big plant next to that. Is that something you're involved in?
MR. PORTER: I'm not, and I know so little about it right now, it would be dangerous for me to try to answer you. I can have either Chris or Darren, the Commissioner Deputy, contact you. They can tell you about that.
MS. NITKA: I've been to several meetings about it.
MR. PORTER: But quite frankly, I hear about it in meetings every Monday, and we've been doing so much Telecom, I kind of --
MS. NITKA: I see. All right. That's not

one you want to deal with. Okay. You've got enough going on.

MS. VICTOR: Just what's in store for our land lines? Are we intending to maintain them going forward?

MR. PORTER: I think for some period of time we're going to have to. You know, the whole country, the old traditional landline phone business is very much in decline. In Northern New England, where we really have a smaller company who now owns that property, it's a little more challenging, and you know, I think Fairpoint has lost roughly half of the lines it had from the time it bought Verizon until today.

At some point, and we talk, you know, even today when you make a call on your cell phone, you really can't do it without Fairpoint and their central office and switches, but ultimately, I think, we'll see a very different model. I don't think that -- for some period of time I think we had a lot of people who were very dependent upon that telephone system.

Largely, you know, what's happened is, you know, in the more profitable populated areas, there have been many competitors, and in the outer

reaches, there are no competitors, but the phone company is having -- they don't have enough revenues anymore to provide the service. It's a serious problem.

MS. VICTOR: Because, you know, in an emergency situation, I mean I was just reading something -- you know, some of the towns that were badly damaged by Irene, you know, they put in, I guess, wireless systems that are backed up with solar in the event the power goes out, because usually if you lose power, you're going to lose your wireless connection whereas landlines are reliable. You know, during, you know, blackouts or during loss of power, the land lines, I mean at least from my experience and from what I've heard from others, landlines continue to work whereas cellular, you know, you lose connection, which in emergencies is problematic.

MR. PORTER: And what we see and that's -- what you're talking about is still largely true. If we go back a few years, if you go look at a central office for the phone company, they have these massive batteries, just a big room, and so when the electricity went out, it didn't require a lot of electricity and so they kept them going.

What's happening now is as they build up broadband, you know, the phone company runs their fiber to what we call a remote terminal, which is literally a box that then -- that they run out with fiber and then it connects to homes, so the old redundancy that we -- what you're talking about, if you had a phone that, you know, it worked, that's a little less true, except the phone company charged the batteries at these remote terminals.

It's interesting in the VTel territory where we now have fiber to the home, you have about an eight-hour battery life when the electricity goes out, and we have had -- you know, I guess at the one level, we were thinking, well, we've got this service territory, it's fiber to the home, it's going to be great, and we have received a substantial amount of complaints about what you were just talking about, and we're actually I think about to have a formal proceeding at the board, Public Service Board, as to how to deal with it.

MS. VICTOR: Meaning that your phone connection goes out?

MR. PORTER: Well, you have a battery, but the battery lasts about eight hours.

MS. VICTOR: Okay. So, Fairpoint is also

currently installing fiber, right, a fair amount of fiber?
MR. PORTER: Fairpoint has about as much or more fiber than anybody in the state.
MR. CHASE: More.
MR. PORTER: They're probably -- they're the largest fiber.
MS. VICTOR: And they also received grants to do -- no, they're doing it on their own.
MR. CHASE: They don't receive grants.
MR. PORTER: They don't receive grants. You heard the Universal Service Fund. It's been around for about thirty years. We all pay it on our phone bill. There is a Federal Universal Service Fund and a Vermont fund. So, the phone companies traditionally have received support from that fund, and the idea was to pay for the -- you know, help pay for the rural service.
Something that happened a few years ago is the FCC did a big proceeding and then issued an order and what they've said is, you know, we're not going to use this money for voice support anymore. We're going to move it to broadband. So, that's something that -- it used to be just a direct subsidy to the phone companies. It's really no

longer there. So, that's another -- I hope it's going to be a good thing for broadband buildout, but for some of the phone companies, it's a further challenge.

MS. NITKA: So, recently, there was -- is there a time frame within which a company is expected to repair lines, phone lines? In other words, there was just recently a situation in Sharon, and maybe in some other towns around there, where I had a couple of calls about people who were old whose land lines -- it's on like a Wednesday I got a call and they were told by the company that they couldn't get them back on until at least the following Monday. So, quite a few people called. I wasn't really clear where they heck they go to try and --

MR. PORTER: Send them to us, but talking about Sharon and kind of more generically, there are service quality standards that all of the phone companies have to report on, and one of them is if they can't get a repair done within 24 hours, they are to report that, and I think they do quarterly reports or whatever, but one thing, one thing we're seeing with Fairpoint -- the Sharon outage was fairly large actually. We have asked Fairpoint to

provide a report to us about that, but we have also seen a spike lately in outages and repair times with Fairpoint, and we are at the moment considering opening an investigation looking into that. I think we maybe had some concerns, kind of to Martine's question earlier, whether they have sufficient staffing, whether there's systems problems, but we're seeing a spike in it and so it doesn't do anything with their reporting requirements, but it's kind of reached the level where we think we probably need to do a little more right now, and I anticipate that that will probably be coming soon.

MS. NITKA: Okay.

MR. PORTER: But, you know, any time you have a complaint about any of these companies, you know, we have a whole division, and that's what they do, but have them contact us and whether it's something that we can absolutely regulate or not, we still tend to seem to have some ability to get a response from companies.

MS. NITKA: Well, it was a real problem because they had no phones, so it was hard to get in touch with them to say, hey, where are you and how many people are out and, you know, it's like --

someone said call so and so, they have a cell phone.
MR. PORTER: My broadband service went out at home one time, and the number you were supposed to call didn't work, and it said just log on to the website, and I was like, well, if I could do that...
MS. NITKA: Yeah, right.
MR. PORTER: But it can be -- but you just bring up another issue actually, some people do have cell service available to them, but others don't, and when there are outages, one of things we want to look at at Fairpoint is somebody who really does -- they have no other option, you know, they probably need to be prioritized, like someone with a medical issue. That's kind of part of it.
MS. NITKA: Right. And the issue for this was elderly people who didn't have cell phones, yeah.
MR. PORTER: Right.
MS. NITKA: And how many there were, I don't really know, but --
MR. PORTER: And the interesting thing about the Sharon outage, I believe, was we found out about it from a reporter and not from the company who was supposed to report it from us.
MS. NITKA: There you are, Christine.

MR. PORTER: Yep.
MS. VICTOR: Now, I'm looking at -- this I just printed out earlier.
MR. PORTER: Can I give Christine -- you all can't see. She's had her hand up.
MS. VICTOR: Sure. Go ahead.
MS. KUMKA: Can you remember your questions because I have mine written down? Do you want to go first?
MS. VICTOR: Oh, no. You go ahead. Go ahead.
MS. KUMKA: Okay. I don't know if this has been addressed already, but in my experience in some of these small towns like Castleton and Wells, the main conflict really is people feel like it's a corporate takeover and corporate interest is really ruling the roost rather than them being provided with any kind of service that will improve their lives.
So, in the Town of Castleton just a couple weeks ago, rather than the Public Service -- anybody from the Public Service Department or Public Service Board, it was a representative of a mobile company. I forgot which one it was. I think it was Vermont something. Anyway, it was a wireless provider.

They wanted to put a tower up. They wanted to get the town's permission and a letter of recommendation to the Public Service Board so they would issue a permit, and nothing was mentioned really about how this would expand their service or it would improve their lives, and there was a lot of pushback from the people about it.

So, my question really is, I haven't looked through all of the telecommuncation plans that Vermont has. I know there's one from 2011, 2012 and on, but is there any kind of plan in there that would give people a sense of the economic development benefits, such as business recruitment and job growth, as opposed to maybe their feeling of a corporate interest here?

From what I've read, there's nothing in any plan that I can see that says, we have a goal in 2025 to recruit business here and grow jobs for Vermonters because of our telecommuncation improvements, and I was just wondering if any official statement like that existed.

MR. PORTER: There's about three questions in there, so I'm going to try to remember them. The first one I want to address is this, you were talking about a tower in a town. This past year,

the Legislature amended section 248(a) and now, you know, a provider who wants to build a tower has to provide a 45-day notice to the town and a whole list of people. What we can do now is if a town has a concern about it, they can request that the provider come to a meeting, which they have to do, and we, the department, get to come to that meeting; and if issues are discussed at the very early stage, just from the notice filing, then we also have the ability to hire experts to help us with the ability to bill that back to the provider, which actually bill back is the best thing that Legislature has ever done for us, I think, because it really helps us.

MS. NITKA: Good.

MR. PORTER: And that law just came into effect this past summer. Actually, Clay has just drafted one of our -- we have many legislative studies to complete on a short timetable this year, but Clay has just completed the first draft of the 248(a) Guide. This should be up on our website on September 1st. The League of Cities & Towns has an annual meeting in October in Essex, I guess, at the fairgrounds. I'm going to be there all day as I believe Clay is, trying to get the message about

about this new law and this new guide. So, for that issue that you talked about, I think there is a solution, but we just need to be sure that people know about it.

MS. KUMKA: Mmm-hmm.

MR. PORTER: And if it continues -- and you know, have the town contact me, we can call you, but that's something that we get very involved with.

MS. KUMKA: Yeah.

MR. PORTER: When you talk about the economic development, it's really interesting that you brought that up, and I'm glad you did, because some of us in this room are old enough to remember when you have the phone company and we regulated that just like we did the electric companies, and as you know regulatory authority over these services is really sort of declining.

MS. KUMKA: Mmm-hmm.

MR. PORTER: And we work very closely with -- Pat Moulton, what's her agency -- ACCD, the Agency of Commerce & Community Development, and actually the Governor's current or the Secretary of Administration's current appointee to the VTA board and he sort of coordinates, is Kiersten Bourgeois, who works for ACCD, and as you know, the legislature

this year sort of sunset the VTA to create a division of connectivity and the Secretary of Administration is charged with kind of writing a plan has to how this is all going to work, and the commerce portion of that, I think, is very important, and I think you'll see more of that. Our telecommunications really have become a lot more about economic development, I think, than traditional regulation and so I think that we'll see a good bit of that addressed in a plan that the Secretary of Administration has got to issue shortly that will deal with that. And have I missed one of the other questions I thought you had asked?

MS. KUMKA: I think that was it. If I may ask you another one, how about the public outreach piece? I know this is part of it, but is there anything -- is there any plan for more Vermonters to know what's going on to maybe ease some of their worries about cell phones in their backyard, cell phone towers in their backyards, yada, yada, yada? Because I think there has been a lack of education, and that's why people feel like they don't have anyone on their side from the state or from any regulatory body when it comes to a company wanting to come in their town and build a tower. I know

it's been the case in at least two towns in Rutland County where they feel like they have no recourse.
MS. VICTOR: I think just because of the Telecommunications Act of 1996, you can't object to the placement of a cell tower on grounds of health impact, you know, proximity to the radiation emitted, so that kind of knocks out that whole field of --
MS. KUMKA: Yep. And I recently heard that the State can't restrict competition among cell providers or phone companies, like if you have an AT & T tower and a Sprint company wants to come in, you can't discriminate against competition even if 4G exists in the twon?
MR. PORTER: No. We are barred from doing anything to prevent their entry into the market by federal law, so that would be correct.
MS. VICTOR: So, your point is that we don't need the redundancy if there's already -- unless, of course, if you're a Verizon customer, you can't be using AT & T?
MS. KUMKA: Well, I'm just bringing up some of the points that I've heard at some of these meetings where people are freaking out because they either don't want it, don't need it, or don't know

enough about it.

MR. PORTER: And Martine brings up a lot of good points, too. I think with the 248(a) process and there have been several iterations of it, I guess three or four years ago, the Legislature made some changes to it and we actually started seeing a lot of people building towers, which is good, and then this past session, I guess it reached the point where the towns came into the Legislature, the League of Cities & Towns said, you know, we need a little more help here.

And so I think the new version of the law will help address a lot of those concerns, but as with all of these things, and I use Putney as an example because I get a lot of complaints from Putney about lack of cell service, I'll get one call and they will say, when are you going to do something about the cell service, and literally I've had the next call be somebody, saying, Dear God, don't let them build this cell tower in Downtown Putney.

So, it is a balancing, I think, that the legislature has done a nice job with the law. I think it is probably about as fair as it can be, and quite frankly as Martine pointed out, we do have

some limitations in cellular permitting at the state level, and there's always a thread of preemption with some issues, and it's like we tell people, we have a good group of people who are concerned about the RF emissions from cell towers, and we're just, you know, expressly preempted by federal law from -- we're not allowed to deal with it.

MS. VICTOR: Which is unfortunate, because it really is a legitimate concern, and that law should never have gone in to place. I think it was just a gift to, you know, the telecommunications companies to say, you know, here's free range to put your towers up where you will without any interference from communities.

MR. PORTER: And people, and people get tired of me saying this, but we're in a strange place with telecommunications right now, and a lot of it revolves around broadband which quite frankly we have no ability to regulate, and until the FCC either declares we can regulate it kind of like we can telephone service, we're sort of in this odd place, and --

MS. NITKA: So, are the cell companies considered a public utility? I mean they're private, but I mean do they get some of the benefits

of being a public utility with regard to say eminent domain, those kinds of things?

MR. PORTER: In Vermont, and they're common carriers, but most of their obligations I guess are federal, wouldn't you say, with the wireless carriers? Eminent domain makes it interesting, and any company in Vermont which has a CPG issued from the Public Service Board is entitled to use the Vermont Eminent Domain Statute.

To the best of my knowledge, no telecommunications provider has ever done so. So, I do believe that it's available, but it's never been used. I had it threatened one time, and we made the phone company buy a person a satellite phone, and there was no eminent domain proceeding.

MS. KUMKA: One last question I had. Who is in charge of regulation and follow-up if a permit is issued to construct a cell tower? Who is in charge of colocation if AT & T wants to lease out space on their tower to someone else or another company, who is in charge of that, and who is in charge of the frequency limits that come off that tower?

MR. PORTER: Okay. I'll start with the frequency limits, the FCC sets what the MPE, maximum permissible exposure, can be. And so any permit

that we get for a cell tower, it has to include a certification of where it falls on the MPE standards. So, if it's within the federal guidelines, then it's -- that's the end of the story. And I'm so sorry, what were the other --
MS. KUMKA: The certification is like a piece of paper from the government?
MR. PORTER: The Public Service Board issues a Certificate of Public Good to these towers.
MS. KUMKA: Yeah.
MR. PORTER: The department as in all proceedings of the board is a statutory party, so we take a position one way or another on each petition that comes in. And what was your third question?
MR. CHASE: I think you mentioned certificate and I think you might not -- I don't think you actually said certificate.
MS. KUMKA: So, they apply for the permit, but in that application process, they have to have information to provide to the Public Service Board.
MR. PORTER: Right.
MS. KUMKA: Like a letter of recommendation from the town, I guess that's optional, but there are certain required things that they need to provide to the state government for the state

government to know that this is meeting its frequency limits or whatever.

MR. PORTER: Clay is absolutely the best person to answer that because he's reviewed many 248(a) applications.

MS. KUMKA: So, is there a federal agency that provides them a certification in order for them to include it in their permit package for the state?

MR. PURVIS: No. And you're talking about the RF emissions specifically?

MS. KUMKA: Yes. Yes.

MR. PURVIS: No. Those guidelines are developed by the FCC, so they're publically available.

MS. KUMKA: Right.

MR. PURVIS: So, what the company will do is then hire an expert to conduct a study about what the emissions will be for that particular facility.

MS. KUMKA: Okay.

MR. PURVIS: And he writes up a report.

MS. KUMKA: Okay.

MR. PURVIS: They're usually independent experts. They have to explain their methodology and how they arrived at their conclusions and so the Department reviews those and I would also say the

vast majority of applications fall somewhere between one and five percent of the maximum permissible exposure, so they're not even close.

The FCC does require -- as you go up toward the maximum permissible exposure limit, there are additional requirements for occupational safety of the workers for sign postings around the facility, and the companies usually comply with those.

MS. KUMKA: Yeah.

MR. CHASE: I would also add to that, that as a general rule, the manufacturers who make the equipment that is going to be used in these kinds of applications are well aware of what the exposure limits are, and they design the -- the equipment is generally designed so that it will be within the exposure limits, because the potential headache for the company for violating the exposure limits is -- can be significant, and there's no reason for -- the engineers when they design the systems design them so that they won't violate any of these exposure rules.

MS. VICTOR: But what, for example, let's say, you have all of the wireless smart meters that are emitting, you know, in their enmeshed networks and then on top of it now you have these new small

cellular DAS like, you know, transmitters and antennas and then you've got 4G LTE, I mean you've got a variety of devices and things, you know, contributing to the overall level. I mean who measures that? You might say that each one individually is under the FCC guideline, but maybe, you know, in concert, they could considerably exceed those guidelines or certainly, you know, become like damagingly, you know, elevated.

MS. KUMKA: There was an issue in Wells with one tower that was near a house, and they kept the -- the couple kept saying it's a health hazard, it's a health hazard. Unfortunately, I don't think they had money to hire any expert to say that colocation was going to be a problem, but they raised the question of this one piece of equipment meets the requirements. If they keep adding onto the tower, will it still fall under the federal regulation? So, I think we're both asking, if there's a state agency, a federal agency, or one specific person who finds the violation of the regulatory limits? I mean when a permit is issued, is there a state employee or a federal agency that sends people out with some kind of meter or is there a way that they can check to make sure the company is not

exceeding any colocation limits or frequency limits on their towers?
It seems, it seems to everyone who is fearful of towers that there is not enough answers to the question of regulation, so I'm kind of trying to understand what -- who would find a violation on a tower if there was one?
MR. PORTER: And the answer to these cell towers that you're talking about, and I think it's like Clay said, the exposure limits are within one to five percent, and so I'm not sure you could -- and I'm the furthest thing from an RF engineer that you could find, but I'm not sure that you could -- at such low levels I'm not sure if there's a cumulative effect if another company colocates on a tower.
MR. PURVIS: It might also be helpful to bring up, over the winter the Department commissioned a study, the epidemiological study of the RF emissions of smart meters, essentially the health effects of smart meters. It's available on our website. I don't know if you've already read it.
MS. VICTOR: I think I've seen --
MR. PURVIS: It's a bit of a tough read,

I'll admit, but people might do well to take a look at it. I think there's an Executive Summary that might be helpful in laying out some of those issues.
MS. VICTOR: I guess one of the things that I heard was that there is a Zigbee component that gives off -- that does radiation as well as just the constant, you know, radiation bursts from the meter itself even when it's not actually transmitting data. So, there's two sources of radiation, but apparently -- I forget now, Richard who was the guy that was hired by the State who --
MR. PURVIS: It's Richard Tell.
MS. VICTOR: Richard Tell only measured maybe the primary emissions like of the data and the self-correcting mechanisms, but ignored the ZigBee component which is another -- but then apparently Elster like disconnected that ZigBee component or this is what we were told.
MR. CHASE: It's complicated. It's interesting.
MR. PORTER: It's a little more interesting than that.
MS. VICTOR: Okay.
MR. PORTER: Elster, and correct me if I'm wrong, Elster wrote in their specs and we all

believe that ZigBee had to affirmatively be turned on.

MS. VICTOR: Yes.

MR. PORTER: So, yes, all these meters came with a ZigBee chip and they came with a -- whatever the other transmitter is.

MR. CHASE: The mesh.

MR. PORTER: The mesh, but you really had to call the company and say turn on ZigBee, and they run at different -- and they're different frequencies.

MS. VICTOR: Mmm-hmm.

MR. PORTER: And so for the first part of the measurements, Mr. Tell was measuring the transmitter frequency and so we did not find out until -- he was here for about a week. We did not figure out until about a week when he went into another spectrum and started looking that the ZigBee were in fact turned on and pinging.

MS. VICTOR: Mmm-hmm.

MR. PORTER: And so we then had him come back and he spent another week in Vermont doing that aspect of it, too, and I want to say -- and then Elster ended up coming up with a software fix so now the ZigBee actually is turned off.

MS. VICTOR: Was that from some central location as opposed to going to each meter and doing --

MR. PORTER: I think, I think it's like -- I think they do it at the brain at the headquarters and it goes out to the --

MS. VICTOR: Okay.

MR. PORTER: But you bring up, you know, an interesting point. In the case of smart meters, we really -- unless, unless a smart meter exceeded some Federal RF emission, which they don't, we did have jurisdiction over electric utilities, so the legislature was able to say, hey, if you don't want a smart meter, you don't have to have one. So, they sort of dealt with it that way for people who didn't want them. Cell towers a little different.

MS. VICTOR: Yeah. No, that is terrific.

MR. PORTER: Because we don't have jurisdication. Yeah.

MS. VICTOR: That you have the no fee opt here in Vermont if you don't want a smart meter. But I just want to say for the record, the couple in Wells on Northeast Mountain, they did win their case against VELCO and they were awarded a million dollars.

MS. KUMKA: Oh, they were?
MS. VICTOR: Yeah.
MS. KUMKA: Yeah, I didn't follow up with it, but they don't live there anymore.
MS. VICTOR: No, they don't.
MS. KUMKA: And the tower is up.
MS. VICTOR: Yeah, they didn't want to live over there with four small children next to that big cell tower.
MR. PURVIS: Are there any more questions or comments?
MS. VICTOR: Can you explain how the smart -- the wireless smart meters are a part of -- like is it the backhaul? Like where do they overlap with the broadband expansion or wireless? I mean how like -- because, to my understanding, that was the decision as to why they chose wireless, because it was kind of combining with, I guess, VTel and other monies that were going towards the whole --
MR. PORTER: Corey can actually tell you why they chose wireless and then I believe the VTel piece came later after that decision was made, but I may be wrong.
MS. VICTOR: Because I thought initially they were going to go with a hard-wired meter in

Vermont.

MR. CHASE: I don't think there was any initially to it. The Vermont utilities were awarded again an ARRA stimulus grant back in 2009 to deploy smart meters, and it was a consortium of all of the -- most of the Vermont electric utilities were awarded this grant, and they immediately started an RFP process to identify which kinds of smart meters they would deploy, and they started the process by thinking about the kinds of functions that they wanted the meters to be able to offer, and they considered a wide range of technologies, including power line carrier, which is a kind of hard-wired meter where the connection to the meter is over the electric line itself. There is precedent for that in Vermont in that the Vermont Electric Co-op uses a power line carrier meter system.

As the consortium considered the kinds of functions that they wanted, they also considered wireless systems, such as the one that they ultimately chose from Elster, and on the other end of the spectrum, they considered smart meters that had cellular radios embedded in them, so every meter would have a cell phone, essentially a cell phone with a data plan on it. Though on the spectrum of

capabilities, the power line carrier is the least capability. The RF mesh like they ultimately chose is sort of in the middle, and the cellular based services are the most robust and most capable, and the cost spectrum is also similar.

They decided that based on the functions they were looking for and the kinds of capabilities and the kind of information that they wanted to gather, that the power line carrier systems didn't have the robustness to their capabilities to them that the RF mesh systems do. They do work in environments like where VEC is, the Vermont Electric Co-Op. They can be -- they can offer a reasonable functionality in very sparsely located, very rural areas.

MS. VICTOR: So, they must have quite a reach with their signals?

MR. CHASE: They can go a very, very long way because it's over the power line, but it only carries a very small amount of data. The data rate is 300 baut, so that's 300 bits per second compared to our modern dial-up. I mean dial-up is 50,000 kilobits per second. So, it's incredibly slow data rate. It's only enough to gather usage data, and even that over not a large amount -- the increments

would be small.
MS. VICTOR: You're talking PLC.
MR. CHASE: Yeah, power line carrier is incredibly slow and it really is essentially not usable in any kind of -- even suburban environment not much less approaching an urban environment. So, the utilities made the decision to buy the wireless -- mesh wireless smart meters based on the functionality and capabilities, but they did their whole evaluation including power line carrier and cellular. The cellular line services are more robost and have a much greater capability of sending all kinds of things and it would have been a good solution for the state going forward, but it was decided that the RF mesh systems were a better balance of cost and capability, and the Department participated in those discussions and evaluations of the different kinds of technologies.
Did I answer your question?
MS. VICTOR: Yes. I'm curious, you know, now that they've been deployed over a year what kind of -- I mean what's the verdict as far as, you know, savings in electricity or I mean are people -- you know, like all of the reasons why, you know, they were put in to begin with, which was enabling people

to, you know, read their electricity usage and monitor their use and -- you know, but it was touted that there would be savings, you know, both in electricity itself and in -- you know, for ratepayers.

MR. PORTER: I think we issued a report last year on the -- we have legislative reports I think every two years on the financial savings that we see from them, and I know we issued one this past year. I think it's on our website. If it's not, I'll send it to you.

MR. PURVIS: It is.

MR. PORTER: It's on our website. I'll tell you a personal experience. I'm signed up with a pilot program with GMP and I got an e-mail the other day saying that I had more electricity usage during a five-hour period on a certain day last week than 100 of my neighbors. Well, every time I have seen the GMP person since I moved into this house, I said my electricity bills are outrageous, and they just -- you know, they just say, oh, shut up. So, I called them and I said, actually, no one was home, there was no air-conditioning, there was nothing. So, the company goes and looks and I have -- there's something wrong at my house. I have

some anomaly or some base load something. So, it helped me find out that there actually is a reason that my bills have been so high.

And I'll let you know if you're interested once I find out what it is.

MS. CHASE: That e-mail, I got a similar e-mail actually not from GMP. You might have got it from GMP. I got it from Efficiency Vermont, the efficiency utility.

MS. NITKA: You have a meter, too?

MR. CHASE: Most of us do.

MS. VICTOR: I opted out so I have a digital Elster with rate 11, so it's not technically smart.

MR. CHASE: But unlike Jim, I used one kilowatt hour, the efficient neighbors used 1.7, and all of my neighbors used 4 on average. So, I'm doing better than my neighbors.

MR. PORTER: As often, Corey also uses the basic DSL Fairpoint package when I pay Comcast so much I can't even keep up with it, so Corey is very good.

MR. CHASE: I just review their rates, and I know which one to pick.

MS. NITKA: You know, it's interesting with the smart meters, because, you know, more than 25

years ago when we bought our house and moved into it, it was, you know, all electric, with was something to panic about, but, you know, there was always the risk of going on to the higher rate if you went over a certain thing. So, like, yeah, people back then who were in the situation were certainly doing the drying of their laundry in the middle of night.

MR. PORTER: Did your house have the red light in the kitchen that came on?

MS. NITKA: No, it didn't.

MR. PORTER: There were a lot of those.

MS. VICTOR: That's what I have, Rate 11.

MR. PORTER: Do you?

MS. VICTOR: I do, yeah. In fact, yes, one day I was out and I actually had a digital GE meter that was put on in 2010 and then, you know, I had opted out obviously of having, you know, a smart meter, but they came one day when I was out and put on an Elster nontransmitting digital meter that -- and apparently they said the older meters had mercury in them. Is that something -- you know, apparently, or at least -- although mine wasn't particularly old being GE, you know, from 2010, but they asserted that in fact, you know -- but, you

know, people have used these analog meters for years with no ill effect, you know, so -- but, yes, so it's Rate 11, but it's --

MS. NITKA: That's very interesting.

MS. VICTOR: Because I -- exactly. My house still has a fair amount of electric heat that I actually don't use, but it's there.

MS. NITKA: Yeah. We don't use ours either, but we have oil, which is up there, too. I mean people are going to electric now.

MR. PORTER: Well, actually electric --

MS. KUMKA: Heat pumps.

MR. PORTER: Heat pumps.

MS. NITKA: Yeah, people are going to electric now.

MR. CHASE: Well, one of the great potentials with having a smart meter system is the ability to offer time-of-use rates. So, if the utility does eventually implement time-of-use rates, they could offer lower rates in off-peak periods, so that instead of offering 14 cents per kilowatt hours 24 hours a day, they could offer you 6 cents per kilowatt hour at night, which is when you need the electric heat anyway, and they could give you a low rate to make it actually affordable for you to use

electricity. They could do that.

MS. NITKA: You know, I live in the Town of Ludlow which has extremely, extremely wonderfully low rates, like maybe the second lowest in the state, maybe the second lowest in New England. I am not sure if that's the case the last two years. Proctor was the lowest when it was owned by Proctor Marble and then of course that was bought by Green Mountain Power, but, you know, those rates are really, really low, and it's been interesting through the years to see how Ludlow Electric has worked with some of the big consumers of heat and electricity, for instance, the Luzenac Mine, which does a lot of drying of talc, and coordinating that with the ski area which is, you know, on Christmas week, there would be any -- you know, 17,000 people in condominiums and all over the place and they needed to run the snow guns.

And so the electric department coordinated, you know, action between the mine and the mountain and -- you know, so that they didn't go into a higher rate by having to buy, I guess, and so that actually the mine then decided to shut down for the week so that they could, you know, make sure they stayed -- there's a lot of cooperation so that they

could stay low.
MR. PORTER: Well, if I don't get my electricity problem fixed, I may come move to Ludlow for lower rates.
MS. NITKA: Come. That's not all of Ludlow. Some of Ludlow is on -- the outlying areas are on Green Mountain Power, and they've filed a couple of petitions from time to time to try and get off of CV it was then and get on Ludlow Electric, which I think twice that happened that people signed petitions to try and do that, but they were not allowed to.
MR. PORTER: If you get five, you can bring it to the Board, because I had a case a few years ago --
MS. NITKA: They had more than that.
MR. PORTER: I had a case a few years ago, in Stowe, there were VEC customers that literally lived across the street from Stowe, and VEC was having some reliability issues at the time and they wanted to become Stowe customers, and actually what we wound up doing was making VEC clear all their trees and their reliability got a hell of a lot better.
MS. NITKA: Well, that's the same reason

these people did, it was the reliability. You know, it was the rate, but it was also some days, you know, they would be out for -- there were sometimes when they were out for three days, and then of course Ludlow, the people on Ludlow Electric across the street were right back on in no time.

MR. PORTER: You know, we have got electric engineers who actually love to look into that kind of stuff if you want to send them our way.

MS. NITKA: I mean I just had a complaint the other day, someone saying, you know, we were out and you were on, you know, my neighbor was on.

MR. PORTER: That's exactly what happened with VEC, and the guy who is now the head of our engineering department, he is the one who said, I'll tell you what the problem is, I mean, you know, he researched it, they worked -- they did proper treatment. And plus, you know, that's a rural area, too, but it fixed it largely.

MS. NITKA: Well, this is a rural area, too, but, you know, people who are CV, now GMP, at the end of the line as they come towards Ludlow and it changes, they complain they're out and they're at the end of the line so they're out longer.

MR. PORTER: Get them to call us, you know,

because they have service quality plans as well.
MS. NITKA: Okay. Interesting. Anybody else?
MS. NITKA: It's been quite interesting. Thanks for coming.
MR. PORTER: Thank you all for coming.
MR. CHASE: Thank you for coming.
MR. PORTER: It's nice for us to have people show up who are interested.
MS. NITKA: Well, I wish there were a few more.
MR. PORTER: Well, we do, too, but we have good folks tonight.
MS. NITKA: So, where are you going? Are you doing some others around the State in a couple other cities?
MR. PURVIS: We are.
MR. PORTER: So far we have done them in Burlington, Brattleboro.
MR. PURVIS: Barre.
MR. PORTER: Here, Barre.
MR. PURVIS: We're doing St. J.
MR. PORTER: St. J next and then --
MR. PURVIS: We're going to set one up in Orange County somewhere, probably Bethel. We got a

request that there were some dairy farmers in that area interested in having one in the middle of the day when they could attend.

MS. NITKA: Oh, good.

MR. PORTER: This was a bad time for them. So, we're going to do one up there.

MR. PURVIS: Yeah. So, we're going to try to do one in the middle of the day there to satisfy that interest.

MS. NITKA: Oh, very good. So, where are you announcing those? I mean I cover Bethel, too.

MR. PORTER: The Bethel one we haven't scheduled. They're all on our website.

MS. NITKA: They are. Okay.

MR. PURVIS: We also announced -- all of them that we have scheduled so far have been announced in newspapers of record.

MS. NITKA: Yeah, that's where I saw this one.

MR. PURVIS: And our friends in the press have also been very helpful posting that.

MR. PORTER: But we can send you, we can send you this notice.

MS. NITKA: Whatever you do.

MR. PORTER: We can e-mail it to you.

MS. NITKA: Okay. And the Bethel one when you get that set up.
MR. PORTER: Right.
MS. NITKA: Yeah, please.
MR. PURVIS: Yeah.
MS. VICTOR: Just an interesting question, you were mentioning broadband, like who is constructing it to schools and libraries. So, that's fiberoptic so it's hard wired and it reaches its destination library or hospital or whatever and then it's wireless within the actual --
MR. CHASE: So that -- the grant I was referring to, there were actually two awards made for middle mile fiber is what they refer to it as. The ARRA grant was for middle mile fiber.
MS. NITKA: Say it again.
MR. CHASE: Middle mile.
MS. NITKA: Oh, middle mile.
MS. VICTOR: As opposed to the last mile.
MR. CHASE: Yeah.
MS. VICTOR: Okay.
MR. CHASE: And they were specifically required to bring fiber to major anchor institutions, and they were required to specify which institutions they would deliver to, and there

were two grants awarded in Vermont, one to Sovernet and another to VTel. The awards from the Federal Government made them not use federal funds to overlap each other, but I believe they used some of their own private capital to overlap each other anyway.

So, those two networks compete to provide service to school -- not all, but many schools and libraries in the state. What those schools and libraries do with the service is really up to the schools and libraries. It's not -- the purpose of the grant was to insure that the institution had access to very fast internet.

MS. VICTOR: Okay.

MR. CHASE: So, typically they provide gigabit speed, so much faster than typical ohms speed to those institutions. And I know that a number of schools wonder about how and where to deploy internet service and some schools have Wi-Fi throughout the school and some --

MS. VICTOR: Like they have computer labs with ethernet cables and things are hard wired?

MR. CHASE: Yes.

MS. VICTOR: Right.

MR. CHASE: But that's a school-by-school

question. There is no -- as far as I know, there is no policy from the state to direct schools how to do it one way or another.

MS. VICTOR: Mmm-hmm.

MS. NITKA: It's been great for libraries. Absolutely great, it's keeping them alive. You know, many more people going to libraries. So many jobs require an on-line application and people don't have the ability to do it so they're doing it in libraries. So, it's been great, absolutely great.

MS. VICTOR: Yeah, as long as it's hard wired, it's better for people than the wireless.

MS. NITKA: Well, I don't know whether it is or isn't, but if it's this one, it's one of those grants that has gotten to libraries in my area. You know, it's terrifc for them. And also -- well, they are Wi-Fi, too, because always there are people parked outside the library in the middle of the night, you know, glowing.

MS. VICTOR: So, what do you see -- where do you see we are as a state in our progression towards, you know -- I mean what are the goals, where do you want to be and where do we want to be in another ten years?

MR. PORTER: I mean generally speaking I

think what we would like to see, and we have a legislative goal now, I think, within the next ten years of a hundred megabits symmetrical, but I would like for everyone to have a wired-in wireless solution. I think they're both very important. I think they're both interdependent, and I know you might disagree with me on one half of that, but that's what I would like to see and to have...

MS. VICTOR: Or to have the option for it?

MR. PORTER: Absolutely to have the option for it.

MS. VICTOR: Right.

MR. PORTER: Because broadband is very important to people, but still got some challenges with the old phone company that we're going to have to deal with.

MR. CHASE: A majority of the population of the state, more than 75 percent, have access to multiple providers of broadband. It's -- that's not -- that segment of the population, because they have got access to competition, the companies that are competing for that business will insure that those customers have access to continual upgrades in service. We're not particularly worried about those people.

We're worried about the people that don't have access to competition because nobody wants to invest to bring them service, and those are the people that are going to be left behind unless we proactively do something.

MR. PORTER: Right. And that's the challenge. Corey is exactly right.

MS. VICTOR: And like isn't that one of the issues, you know, I have Verizon, and I personally don't have a smart phone, but my two daughters are on my plan, and all I can say is, you know, like my monthly bills are basically skyrocketing and I keep increasing, you know, the gigabytes for data and what have you, and, you know, for most people -- you know, I mean I think it's horrendously expensive, and, you know, with the proliferation of Wi-Fi, you know, people -- it just makes the ability to use, you know, like use more gigabytes and more data, you know, like universal and always available, and so for -- I don't know, for your average Vermonter, I mean isn't that a very expensive undertaking, you know, to have -- I mean obviously I guess maybe you have caps or you have a certain plan or what have you, but it just seems from my experience, you know, they exceed the plan and then there's a fine for the

extra -- you know, and it goes on.
MR. PORTER: Well, you get the e-mail you're about to exceed your data. I get them every month for my daughter. Yes, but that's --
MS. VICTOR: I mean that's like not an affordable type of --
MR. PORTER: It's not affordable. Affordabilty --
MS. VICTOR: I mean for somebody who is giving up a land line and, you know, is just using mobile.
MR. PORTER: Actually, one thing that we have done in the state is we've always had a low income program for the wire telephone service as you know and the Lifeline program, and then what we've started doing is permitting some of the prepaid wireless carriers, which are Lifeline cell phones, and we hope to have our first provider actually selling the things this year. We've had a little bit of problems with the form that has to be used with the DCF, but I think we're about to work through that.
And so, no, it's not going to be the smart phone that your daughter has, but it is connectivity on a basic cell phone with texting, they can get

these basic packages, and then some of the cable providers have got, you know, what they call internet essentials. VTel, actually the VTel project, they're required to have a $9.95, $10.00 a month broadband program for low income and Comcast does that as well.

MR. CHASE: States are preempted from regulating the rates of cable company and wireless companies. So, even if we wanted to, we couldn't regulate what Verizon charges for its wireless service, but I would say the FCC's general approach to regulating wireless is to insure competition, and they don't really try to regulate what the companies charge. They want to make sure that you have a choice and that if you don't -- if you're unhappy with what Verizon is charging you, go to AT & T.

MS. VICTOR: But there's only four main providers.

MR. CHASE: But there's also proliferation of prepaid service, which is actually considerably less expensive. The Wal-Mart brand, I think it's called SmartTalk or StraightTalk.

MS. NITKA: StraightTalk.

MR. PURVIS: It's StraightTalk. Track phones.

MR. CHASE: It's fifty dollars a month for unlimited service.
MR. PORTER: And prepaid is a growing and huge piece of the cell phone market.
MR. PURVIS: Our plan also does address competition in the cell phone market. That's an interesting subject, but I would say that AT & T has recently lowered its data plan quite a bit to compete head to head with Verizon. I believe they're now actually the cheapest. And there is an argument that it is working.
MR. PORTER: Yeah, someone did away with contracts and then made the other ones -- it was one or the other.
MR. PURVIS: Yeah, AT & T slashed their data plan in half. I think for the one gigabyte plan, I think it is now forty-five dollars, which they slashed from I think nearly seventy. So, it's not quite half, but it's substantial and it's now the lowest of the four major providers.
But with that said, FTC, I think, would consider that market to not be very competitive overall because of the consolidation over the last fifteen years.
MS. VICTOR: Which makes that, what is it,

Comcast-Time Warner merger kind of seem to be like not a good direction to go in, right, to have further consolidation?

MR. PURVIS: That's a different market.

MR. PORTER: This is the interesting thing, the cable providers across the country, they don't compete with each other.

MR. CHASE: It doesn't make sense for them to compete, because they don't overbuild each other because they know that it doesn't make sense to overbuild each other because they couldn't get the market share. They can barely get the market share to --

MS. VICTOR: In their own service territories.

MR. CHASE: Because they're competing with satellite. They say they can barely justify the expense.

MS. VICTOR: Now, what piece of broadband does satellite contribute, like what percentage?

MR. CHASE: Very small.

MS. VICTOR: Very small. And why is that, it's not very reliable or expensive?

MR. CHASE: We hear anecdotally that people are very dissatisfied with the service. Often it's

not that it's not reliable per se, it's that it's very susceptible to the weather. So, when you have a large storm and it might not be a storm right above you, it might be a storm 50 miles away or 70 miles away, if it's to the south, it's between you and the satellite and all of that humidity in the atmosphere interrupts the signal and it deteriorates the quality of your service.

MS. VICTOR: Well, thank you.

MS. NITKA: Very good. Thank you very much.

MR. PORTER: Thank you. Good to see you.

MS. VICTOR: Good to see you, Jim.

MR. CHASE: I wanted to thank our court reporter.

MS. VICTOR: Yes, thank you.

MS. NITKA: Yes, good job. My gosh.

(Whereupon, the hearing was concluded at 8:44 p.m.)

C E R T I F I C A T E

I, Maureen A. Booth, Registered Merit Reporter and Notary Public, hereby certify that the foregoing pages, numbered 2 through 71, are a true and accurate transcription of my stenographic notes of the Public Hearing before the Vermont Department of Public Service, taken before me on the 28th day of August, 2014, at the offices of Hampton Inn,, 47 Farrell Road, Wentworth Room, Rutland, Vermont, and transcribed by me for use in the matter of IN RE: THE 2014 VERMONT TELECOMMUNICATION PLAN, now pending in the State of Vermont, Department of Public Service.

Dated this 11th day of September, 2011.

Maureen A. Booth, RMR